[0027] The subset of software applications **72** that control basic device operations, including data and voice communication applications, will normally be installed on the portable electronic device **20** during its manufacture. Other software applications include a message application **74** that can be any suitable software program that allows a user of the portable electronic device **20** to send and receive electronic messages. Various alternatives exist for the message application **74** as is well known to those skilled in the art. Messages that have been sent or received by the user are typically stored in the flash memory **48** of the portable electronic device **20** or some other suitable storage element in the portable electronic device **20**. In at least some embodiments, some of the sent and received messages may be stored remotely from the device **20** such as in a data store of an associated host system that the portable electronic device **20** communicates with.

[0028] The software applications can further include a device state module **76**, a Personal Information Manager (PIM) **78**, and other suitable modules (not shown). The device state module **76** provides persistence, i.e. the device state module **76** ensures that important device data is stored in persistent memory, such as the flash memory **48**, so that the data is not lost when the portable electronic device **20** is turned off or loses power.

[0029] The PIM **78** includes functionality for organizing and managing data items of interest to the user, such as, but not limited to, e-mail, contacts, calendar events, voice mails, appointments, and task items. A PIM application has the ability to send and receive data items via the wireless network **100**. PIM data items may be seamlessly integrated, synchronized, and updated via the wireless network **100** with the portable electronic device subscriber's corresponding data items stored and/or associated with a host computer system. This functionality creates a mirrored host computer on the portable electronic device **20** with respect to such items. This can be particularly advantageous when the host computer system is the portable electronic device subscriber's office computer system.

[0030] The portable electronic device **20** also includes a connect module **80**, and an information technology (IT) policy module **82**. The connect module **80** implements the communication protocols that are required for the portable electronic device **20** to communicate with the wireless infrastructure and any host system, such as an enterprise system, that the portable electronic device **20** is authorized to interface with.

[0031] The connect module **80** includes a set of APIs that can be integrated with the portable electronic device **20** to allow the portable electronic device **20** to use any number of services associated with the enterprise system. The connect module **80** allows the portable electronic device **20** to establish an end-to-end secure, authenticated communication pipe with the host system. A subset of applications for which access is provided by the connect module **80** can be used to pass IT policy commands from the host system to the portable electronic device **20**. This can be done in a wireless or wired manner. These instructions can then be passed to the IT policy module **82** to modify the configuration of the device **20**. Alternatively, in some cases, the IT policy update can also be done over a wired connection.

[0032] Other types of software applications can also be installed on the portable electronic device **20**. These software applications can be third party applications, which are added after the manufacture of the portable electronic device **20**. Examples of third party applications include games, calculators, utilities, etc.

[0033] The additional applications can be loaded onto the portable electronic device **20** through at least one of the wireless network **100**, the auxiliary I/O subsystem **50**, the data port **52**, the short-range communications subsystem **58**, or any other suitable device subsystem **60**. This flexibility in application installation increases the functionality of the portable electronic device **20** and may provide enhanced on-device functions, communication-related functions, or both. For example, secure communication applications may enable electronic commerce functions and other such financial transactions to be performed using the portable electronic device **20**.

[0034] The data port **52** enables a subscriber to set preferences through an external device or software application and extends the capabilities of the portable electronic device **20** by providing for information or software downloads to the portable electronic device **20** other than through a wireless communication network. The alternate download path may, for example, be used to load an encryption key onto the portable electronic device **20** through a direct and thus reliable and trusted connection to provide secure device communication.

[0035] The data port **52** can be any suitable port that enables data communication between the portable electronic device **20** and another computing device. The data port **52** can be a serial or a parallel port. In some instances, the data port **52** can be a USB port that includes data lines for data transfer and a supply line that can provide a charging current to charge the battery **68** of the portable electronic device **20**.

[0036] The short-range communications subsystem **58** provides for communication between the portable electronic device **20** and different systems or devices, without the use of the wireless network **100**. For example, the subsystem **58** may include an infrared device and associated circuits and components for short-range communication. Examples of short-range communication standards include standards developed by the Infrared Data Association (IrDA), Bluetooth, and the 802.11 family of standards developed by IEEE.

[0037] In use, a received signal such as a text message, an e-mail message, or web page download is processed by the communication subsystem **42** and input to the processor **40**. The processor **40** then processes the received signal for output to the display **28** or alternatively to the auxiliary I/O subsystem **50**. A subscriber may also compose data items, such as e-mail messages, for example, using the touch-sensitive input surface **28** in conjunction with the display device **26** and possibly the auxiliary I/O subsystem **50**. The auxiliary I/O subsystem **50** may include devices such as a mouse, track ball, infrared fingerprint detector, or a roller wheel with dynamic button pressing capability. A keyboard can also be provided, such as an alphanumeric keyboard or a telephone-type keypad or both. A composed item may be transmitted over the wireless network **100** through the communication subsystem **42**.

[0038] For voice communications, the overall operation of the portable electronic device **20** is substantially similar, except that the received signals are output to the speaker **54**, and signals for transmission are generated by the microphone **56**. Alternative voice or audio I/O subsystems, such as a voice message recording subsystem, can also be implemented on the portable electronic device **20**. Although voice or audio